

AMENDMENTS

Please amend the application as indicated hereafter.

In the Specification

Please delete the paragraph(s) of the specification identified below, and replace with the following clean copy paragraph(s).

-Page 4, lines 1-3 ✓

A1
CONCL. FIG. 11 is a display diagram of a PIN entry screen subsequently to the rental options screen presented in FIG. 10 indicating that the selected MOD title is blocked because of its rating and providing a personal identification (PIN) entry to access the blocked MOD title.

-Page 8, lines 13-19 ✓

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CONCL. The applications that are stored in the DRAM 44 may be applications that are loaded when the DHCT 16 initializes or are applications that are downloaded to the DHCT 16 upon a user-initiated command using an input device such as the remote 40. In this non-limiting example, as shown in FIG. 2, DRAM 44 contains the following application clients: an e-mail application client 59, a digital music application client 61, a service guide application 63 and a media-on-demand application client (MOD) 65 (discussed in more detail below). It should be clear that these applications are not limiting and merely serve as examples for this present embodiment of the invention.

-Page 11, lines 26-33 ✓

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CONCL. Another signaling scenario supported by the present invention is the VOD content server 22 in-progress scenario. FIG. 4F is a display diagram 110 depicting the MOD application server in progress request 111 message communicated from the VOD content server 22 to the DNCS 23. The DNCS 23 uses this message 111 as an audit mechanism to determine if it is in sync with the VOD content server 22. The MOD application server periodically sends this MOD application server session in progress message 111 to the DNCS 23. The message 111 contains a list of all active sessions for that MOD application server, and the DNCS 23 compares this list to its list of active sessions for that particular application server. The DNCS 23 takes appropriate action if the lists do not match.

-Page 11, lines 34-37 through page 12, lines 1-3

A4
CONCL The DNCS 23 periodically initiates a MOD application client session in progress request 114 as shown in scenario 113 in FIG. 4G. This message 114 is used to periodically inform the network 18 of the sessions that are active on a DHCT 16. The DNCS 23 uses this message as an audit mechanism to determine if it is in sync with the DHCT 16. The DHCT 16 periodically sends a client in session progress message (not shown). This message contains a list of all active sessions for the DHCT 16. The DNCS 23 compares this list to a list of active sessions for that DHCT 16 and takes appropriate action if the lists do not match.

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A5
CONCL The present invention permits the DHCT 16 to initiate a MOD session tear down scenario. FIG. 4H is a display diagram 118 depicting the procedure for tearing down a session using the client initiated session release scenario. A session that is active on that particular DHCT 16 may be torn down by the DHCT 16. To initiate this process, the DHCT 16 sends a MOD application client release request 119 to the DNCS 23. The DHCT 16 sends the client release request 119 after it has stopped using all resources for a session that it is attempting to tear down. The DNCS 23 receives the client release request 119 and initiates a MOD server release indication 121 to the VOD content server 22. The VOD content server 22 responds with a server release response 123 to the DNCS 23 which is then passed DHCT 16 in the form of a MOD client release confirm message 124. The network 18 does not release the resources provided for the session until the MOD server release response 123 is received from the MOD application server 19.

-Page 12, lines 23-31

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CONCL A MOD session tear down scenario may also be initiated by the DNCS 23. FIG. 4J is display diagram 140 of the DNCS 23 initiated session tear down scenario. In so doing, the DNCS 23 initiates a server release indication message 142 to the VOD content server 22 providing the MOD session. The DNCS 23 may also simultaneously release the client release indication message 144 to the DHCT 16 notifying the DHCT 16 of the tear down sequence. The VOD content server 22 that received the server release indication message 142 responds by a server release response message 146, and the DHCT 16 responds to the client release indication message 144 with a client release response message 148. The resources attributed or assigned to the MOD session are not released until both the client release response message 148 and the server release response message 146 are received by the DNCS 23.

-Page 12, lines 32-37 through page 13, lines 1-10

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CONT'D The VOD content server 22 provides an API by which the application servers can register interest in session setup and tear down events. Messages describing these events are sent to registered application

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CONCL

servers and include the session ID and the user (application) data contained in the session setup request, such as the MAC address of the DHCT 16, the title ID, and the rental option in the case of the MOD application. In this way the MOD application server can be notified when a VOD session is established with the VOD content server 22 by the MOD application client 65. Additionally, the MOD application server 19 may use the API to request that the VOD content server 22 tear down the session if the user of the DHCT 16 is not authorized for the MOD service for billing reasons. The DHCT 16, the VOD content server 22, and the DNCS 23 may each initiate a session status scenario to determine the status of both the network and the other components described above. FIG. 4K is a display diagram 150 of a client initiated session status scenario. This procedure is used by DHCT 16 to query the DNCS 23 for the sessions that the DNCS 23 is maintaining for that DHCT 16. This procedure is also used to obtain detailed information about a session so that the DHCT 16 may re-establish a session after a reboot. The DHCT 16 initiates a client status request message 152 to the DNCS 23 to determine the status of the network 18. The DNCS 23 responds with a client status confirm message 154 reporting the status to the DHCT 16.

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CONCL

FIG. 4M is a display diagram of a network initiated client session status request 161 and a server session status request 165. This procedure is used by the DNCS 23 to query a DHCT 16 for the sessions that are currently active. This procedure is also used to obtain detailed information about a session so the DNCS 23 can determine if a session at the DNCS 23 is the same as the session maintained by the DHCT 16. In the client session status request scenario, the DNCS 23 initiates a client status indication message 162 to the DHCT 16 requesting status indication information. The DHCT 16 responds with a client status response message 164 to the DNCS reporting on the status of the MOD session. Similarly, the DNCS 23, in the server session status request 165, initiates a server status indication message 166 to the VOD content server 22. The VOD content server 22 responds with the status information in the form of a server status response message 168 to the DNCS 23 reporting on its status.

-Page 16, lines 7-11 ✓

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CONCL

FIG. 8C is a display diagram of the MOD title catalog screen 197 configured as option two as described above. In this non-limiting example, a description of the MOD title highlighted 201a in the current browse-by list 201 is shown in right portion of 204c. In this non-limiting example, selectable buttons 207 may be included in the right portion 204c providing additional options to those shown in button bar 209.

-Page 16, lines 12-17

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CONCL.

FIG. 8D is a display diagram of a title description screen 218 (option four) presented to the user upon request from the MOD title catalog screen 197 in FIG. 8A. The title description screen 218 is a full screen view. In a center portion of the display 220, detailed descriptive information is presented. The user is presented a cancel option 221 which re-displays the MOD title catalog screen 197. If the title information is larger than that available on the screen, scrolling capability is provided via arrow input keys for the user to view the entire title information.

-Page 19, lines 14-24

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CONCL.

Upon addition of a new MOD catalog or title category to the BFS server 28, the new files are immediately broadcast across the network 18 at intermittent intervals enabling the MOD application client 65 on each DHCT 16 to receive the updated information. To notify the MOD application client 65 that new catalog files are available, the MOD application server 19 uses the DSM-CC 34 on the DNCS 23 to send a UDP pass-thru message to the MOD application client via the operating system of the DHCT 16. Each MOD application client, upon determining that a new catalog or an updated version is available, uses the BFS client 43 (FIG. 3) in the DHCT 16 to download the files and store them in the MOD application client 65 database (not shown). The updated version of the files are implemented the next time the user activates the MOD title catalog screen 197. Alternatively, the MOD application client may chose to wait until the user activates the MOD service to load the most recent version of the MOD catalog for display at that time.

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CONCL.

Similarly, when new MOD titles are available for sale or release, a system operator adds the MOD titles to the MOD application server 19. The MOD application server 19 (FIG. 2) provides both a graphical user interface (GUI) and an API interface to install a MOD title asset onto the system. Typically this is done by, as a non-limiting example, inserting media such as a tape into the MOD application server 19 and using the graphical user interface (GUI) to define the meta-data about the title, but this process can be automated via the use of APIs (Application Programming Interfaces). The MOD title includes MPEG video assets for the title and optionally a trailer, as well as meta-data about the title. Meta-data includes but is not limited to data about the title, such as it's name, description, rating, directors, actors, length, etc. The MOD application server 19 assigns a unique title ID and installs the added MOD titles to the VOD content server 22 by transferring title ID and MOD title MPEG content. The VOD content manager 21 adds the MPEG content to the VOD content servers 22. The MPEG content for each newly added MOD title may include not only the video (or other media), but may also include MPEG data for a trailer for the MOD title that may be later included on a trailer channel or in the MOD title catalog screen 197 in portion 204a as described above.

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CONCL.

Returning to FIG. 5, once the user navigates through the MOD title catalog screen 197 and chooses a MOD title for purchase, DHCT 16 presents the user a title purchase option, as shown in step 213. FIG. 10 is a display diagram of a rental option screen 227 as one embodiment of the title purchase option described in step 213 (FIG. 5). Descriptive information about the selected MOD title is shown to the user in a center portion of the display 228. Contained in this descriptive information is one or more "rental options": including both the rental period and rental price for the selected MOD title. In one rental option, the rental period may be the MOD title length—thereby requiring the user to immediately rent the MOD title and view it in its entirety at the time of rental. In another rental option, the rental period in the descriptive portion of the display 228 may be some integer multiplier of the MOD title length. As a non-limiting example, the rental period, as configured by the system operator at the headend 11 may be set to 2 times the MOD title length, so a two hour movie would enable a rental period of four hours. As yet another rental option, the rental period may be set to a specific period of time, such as a period of hours, days, or weeks. The price of the rental is included in the descriptive portion of the display 228 and may vary according to the popularity of the MOD title, the length of rental, and other variables as discussed in more detail below. Finally, if the user desires to rent the selected MOD title shown in the rental option screen 227 (FIG. 10), the user may depress a button on the remote 40 (FIG. 7) as directed in the rental option button bar 229. A cancel option may similarly be presented in the rental option button bar 229 that returns the user to the MOD title catalog screen 197. If more than one rental option is provided for the title, the rental option screen 227 includes a scrolling list of rental options.

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CONCL.

As still yet another rental option, the user may have the option to change the language setting of the purchased MOD title to one of any other available languages from the default setting. The MPEG data stream of the MOD title as delivered to the DHCT 16 may include two or more language audio tracks such that the DHCT 16 may be configured to play an alternately chosen language according to the preference of the user. As a non-limiting example, a French speaking user may configure DHCT 16, by an interface (not shown) presented by the MOD application client 65, to present the purchased MOD title in French language audio as opposed to, for example, an English language default setting. Additionally, the DHCT 16 may, upon the user initially configuring the language, set the default for future presentations to the newly selected language. Alternatively, the MOD application client may access the language settings of the navigator 51 (FIG. 3) and present all purchased MOD titles according to that language setting—provided the chosen language is one included in the MPEG audio track of the MOD title.

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CONCL.

Once the user purchases a particular MOD title from the rental options screen 227 (FIG. 10) but prior to presentation of the title, the MOD application client 65 determines if the title is blocked by its particular rating, as shown in step 230 (FIG. 5). To determine if a particular MOD title is blocked because of its rating, the user should have previously entered a setting in the DHCT 16 defining what types of ratings would be acceptable for viewing. In the preferred embodiment this information is maintained by the resident navigator application and made available to other application clients via an application programming interface (API). The MOD application client 65 accesses the pre-configured rating parameters for comparison to the rating information contained in the catalog for the subject MOD title being purchased. As a non-limiting example, if a user configured the DHCT 16 to prevent any movie with an "R" rating from being viewed or purchased, the MOD application client 65 would not allow any movie with such rating to be purchased or viewed unless specifically overridden by the user. In this non-limiting example, parents may choose to block MOD titles with "R" ratings to prevent children from accessing the MOD titles while allowing the parents to access the blocked titles upon entry of a proper PIN. Thus, if the MOD application client 65 determines in step 230 that the selected MOD title is blocked by its rating, the application client 65 allows the user to unblock the title on a proper PIN entry, as shown in step 231. In the preferred embodiment, the MOD application client 65 uses the "blocking PIN" number stored in the settings with the navigator 51 application. As such, a user can configure a single parental control PIN that is shared among applications. The user is allowed to escape or cancel from the PIN entry screen for overriding the title blocking according to rating, as shown in step 232. If the user chooses to escape the PIN entry screen or enters an improper or incorrect PIN, as shown in step 233, the MOD application client 65 returns the user to the MOD title catalog screen 197 where the user reinitiates the MOD purchase sequence described above.

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CONCL.

When the end of the MOD title is reached or the time allotted for viewing the MOD title has expired, the DHCT 16 presents the user with a message denoting that the rental period is over or that the MOD title has ended, as in step 260. FIG. 15 is a display diagram of the rental period end screen 260 presented to the user when the duration of the rental period has expired. Upon entering the cancel command through remote 40 (FIG. 7) as instructed by the rental period end screen 260, the user returns to the MOD title catalog screen 197 (FIG. 5).